

**GOVERNMENT TAKES UP
NEW LINE OF STUDY
FOR THEIR BENEFIT.**

By **RENE BACHE**



GOOD
HOUSEKEEPING
MAKES
PLEASURABLE
EATING



SCIENTIFIC
AND EXPERI-
MENTAL MEAL
AT THE GOVERNMENT
HOUSEKEEPING BUREAU



Good Cooking is an Occupation Elegant
as well as Enjoyable.

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BUTTER	WATER 16.0 PROTEIN 1.0
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MILK

MAKE-UP OF SOME FAMILIAR FOODS.

[illegible]

Woman's Nature

Is to love children, and no home can be completely happy without them, yet the ordeal through which the expectant mother must pass usually is so full of suffering, danger and fear that she looks forward to the critical hour with apprehension and dread.

...s friend, by its penetrating and soothing properties,
...s nausea, nervousness, and all unpleasant feelings, and
...prepares the system for the
...al that she passes through
...event safely and with
...the suffering, as numbers
...ve testified and said, "it is
...th its weight in gold." \$1.00 per
...le of druggists. Book containing
...able information mailed free.

**Mother's
Friend**

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Mother's Friend

maintain her health and working capacity while accomplishing best results by her labor, it is necessary that there be a balance between the energy-producing she expends and the energy-producing nourishment she takes into her body. And right here comes the question, how much energy ought the average woman be expected to produce? What is a woman-power? We know what a horse-power is, but a woman-power, or a man-power, for that matter, is a unit of labor capacity as yet unestablished.

The Women's bureau wants to find out about these things and proposes

Through processes of scientific inquiry, to reduce them to definite figures. There is now a long set-up in the Department of Agriculture in Washington a special apparatus for the purpose, which is a box the size of a small room—big enough, that is to say, for a person to live in for days, or even weeks, if desired. So completely is this box, with its temporary occupant, under scrutiny, so to speak, by the help of electrical and other ingenious contrivances, that even the breath of the individual inside is analyzed.

By means of the apparatus in ques-

tion the work required for any household task may be measured with absolute accuracy. The worker is put into the box, makes a record of the time he or she spends half an hour, and the machine will show just how much energy she has expended in the operation. The energy expended in the work is because the energy developed is converted into heat, which is subjected to measurement. In the same way it may be measured how much energy is expended in running a sewing machine for an hour, or in performing any other domestic labor, such as the cooking of a meal. To set up a range in the box is no more difficult than setting up a range of work, and the latter may be duplicated without fire.

from the peeling of the potatoes to the mixing of a cake, and even to the plating of the meal upon a table.

Cooking processes, fundamentally, are haphazard processes and are subject to the laws of physics and chemistry. It is not practicable to make every woman a chemist; indeed, no reasonable object would be gained thereby. But it is the duty of the chemist, in the kitchen, to explain the principles concerned and to reduce them to such shape that the everyday housewife can use them. Cooking hitherto has been made up of rules, or rules—art purged as one might say, is rule of thumb. But the Women's Bureau is

If the housewife finds it desirable to cut down expenses, she will find it worth while to look over the published lists of all kinds of foods furnished by the Women's bureau, and pick out those which afford the greatest amount of nutriment for the price—the exact five

ures being given in each case. Among these, she will discover, are flour and other cereal products, potatoes, milk and cream, eggs, butter, oil, and so forth. Green vegetables, like celery, and fruits, such as oranges, she learns, contribute much attractiveness to the diet but little nourishment. She also discovers, by the words, they furnish little "body-building stuff," little energy to run the body machine and little mineral matter to make bones and teeth and to maintain the addition of new blood.

A clever housewife can take cheap materials and by utilizing them skillfully convert them into palatable dishes which will give her family the best preparation for keeping healthy on little

money and always having an attractive table, knows how to make her labor and ingenuity take the place of market cost. She turns to best account everything she has, and her disposal, suffering little loss by waste. She is acquainted with the most economical cuts of meats and well understands that if the food served is palatable and well cooked, comparative little will be lost, even on the other hand, if it be badly cooked the waste is large.

Economy in Cooking.

The Woman's bureau has given a good deal of study to the comparative

economy of different methods of cooking. Some ways of cooking, as every housewife knows, are very wasteful. If roast is to be prepared, for example, the precious juices are lost by too low a temperature in the oven. The oven should be good and hot to start with, in order to crisp the outside quickly and make of it a hard shell to hold the juices. It pays, indeed, to use a thermometer, and the newest household ranges are provided with thermometer dials which, at a glance, the exact temperature of the oven. Hotel ovens have, hour by hour, the exact tempera-

The kitchen of a hotel or factory on a large scale and uniformity of product is as important for its output as for that of a manufacturing establishment in any other line. The culinary department of the everyday household ought to be managed on scientific principles, from the purchase of the food to the preparation thereof. It is not necessary that the housewife shall be a chemist or a physicist, but she ought to be able to apply the principles of chemistry. She ought to know what kinds of food to buy in order to meet the requirements of the pocketbook, the health and the digestion, and how to combine, in the dishes that she prepares, the

The dealer who keeps food stuffs in stock finds it worth his while to study the storage problems. So, likewise, should the housewife, utilizing knowledge that has been gained through scientific research and which is freely at her disposal. If her flour is not to deteriorate, she must keep it covered, and her vegetables and fruits should be stored in a cool, well-ventilated and cool place. Her ice-box must be thoroughly cleaned, else molds and other micro-organisms, developing in it, will give a bad taste to the butter and milk. The refrigerator of the home-maker is wise she will not put her vegetables in water to keep them fresh, like flowers in a vase, but will wrap them in a damp cloth. The soaking of green vegetables loses much of their flavor, which passes into the water that is thrown away.

Meats, as everybody knows, shrink considerably when cooked. But when a piece of beef is boiled, though it be for several hours, very little of the nutritive it contains is lost, and that which remains is better than anything that departs from the beef, such as the soup, gravy, or broth. Hence, it follows that broths, notwithstanding the popular impression to the contrary, are only slightly nutritious. Clear soups, for the same reason, are not very nourishing. But they contain the flavor of the meat, are palatable, and stimulate the digestive function. Stimulation of appetite by palatability, when properly utilized, is an important help-building factor.

Nutritious Breads.

for the reason that they afford variety. To a child a piece of plain bread, unless the little one is very hungry, is not palatable in itself. But spread upon the bread some butter and add a small quantity of jam and the combination becomes a delicacy, received with delight and eaten with eagerness. This is a simple illustration of the advantage gained by combining food materials with a view to rendering them palatable as well as wholesome. It represents the principle on which the catering for a family table ought to be conducted.

Cost of Cooking.
Experiments are in progress which have for their object the determination of the cost of an hour's cooking with different kinds of fuel and with various appliances. When this investigation has been completed the results will be published in such form as to enable the housewife to know just what kind of fuel and what sort of appliance may be utilized for any given purpose most eco-

2. In connection with the work of the Women's bureau study is being made of such problems as ventilation and the protective power of clothing. Fresh air in the home and the relation of temperature and air moisture to the physical well-being of the family, are being scientifically considered. And where clothing is concerned, the problem attacked not only has to do with the efficiency of different fabrics as a protection for the body against cold, but also

The food investigations, which are under the direction of Dr. C. Ford Langworthy, were originally supervised and developed by the late Prof. W. O. Atwater. Much encouragement has been given to them by Secretary of Agriculture James Wilson, through a broad-minded recognition of the fact that no study of agricultural problems is complete without consideration of those which concern the interests of the farmer's wife.

Union Theological Seminary, New York, was intended by its founders to be, as its name would imply, a school where men of any denomination might prepare themselves for the Christian ministry. But although its intent was thus broad, the seminary was nevertheless "inwardly" a good deal more so, so that, while it is said never to have been officially Presbyterian, it nevertheless reported to the General Assembly of that denomination and was the scene of many of the theological controversies that settled about the person of the Rev. Dr. Charles A. Briggs, then and now a professor in the seminary, and which were in controversy with Prof. A. C. McGiffert as its centre. Dr. Briggs was driven into the Episcopal fold and Dr. McGiffert became a Congregationalist, and the Seminary was left without an official Presbyterianism because the seminary trustees stood by the members

Dr. Hall is not only a wise administrator, but he has never outgrown the habit of being a student. His books and lectures, principally on religious topics, are recognized as reflecting the progressive scholarship of the day, and they are attentively listened to and as widely read as are the words of any other American theologian. Dr. Hall



Rev. Dr. C. C. HALL

has succeeded in bringing about an allegiance between his institution and Columbia University and the Teachers' College, so that the students of Union Seminary have practically all the advantages of those institutions as well as of their own. This allegiance will be even closer when the new buildings, now projected for the seminary, are constructed, for these will be close to those of Columbia, and the seminary will add one more to the list of educational institutions that promise to make Morningside Heights in New

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